

## Hospitalizations for Mental Disorders and Substance Abuse

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In 2000, the rate of hospital discharges with a principal diagnosis of a mental disorder, including substance abuse, was substantially higher in Rhode Island (11.9 per 1,000 population) than nationally (7.7).<sup>1</sup> In a regional context, however, Rhode Island's discharge rate was lower than the average for Northeastern states (13.2 per 1,000 population).<sup>2</sup> Reasons for the higher rates of discharges with mental disorders may include variations among regions in access to health care providers, in the provisions of third-party coverage, and in the social acceptability of being diagnosed with a mental disorder, as well as due to differences in underlying disease rates. The recent establishment of reporting of hospital discharge data from the two private psychiatric specialty hospitals in Rhode Island allows the analysis of statewide patterns of inpatient mental health care; selected findings are presented in this report.

**Methods.** Acute-care general hospitals in Rhode Island have been reporting patient-level data for every patient discharged since October 1, 1989 as required by licensure regulations. As of October 1, 1998, Rhode Island's two psychiatric specialty hospitals, Butler and Bradley Hospitals, and the Rehabilitation Hospital began reporting patient-level data. The data reported includes up to eleven diagnoses made during the inpatient stay, coded to the International Classification of Diseases, 9<sup>th</sup> Revision, Clinical Modification (ICD-9-CM).<sup>3</sup> This analysis examines discharges with a principal or additional diagnosis of a mental disorder or substance abuse (MD/SA), defined according to the relevant Clinical Classifications Software<sup>4</sup> categories, modified by the exclusion of two ICD-9-CM codes for tobacco use – 305.1 and V15.82. All discharges during calendar year 2002 meeting the above criteria for MD/SA are included in the analysis. To avoid double counting, discharges with both a principal and additional diagnosis of MD/SA are included only in the group with principal diagnosis of MD/SA.

**Results.** In 2002, there were 13,168 inpatient discharges from non-Federal acute-care hospitals in Rhode Island with a principal diagnosis of MD/SA. There were an additional 21,807 discharges with a diagnosis of MD/SA secondary to a principal diagnosis of physical illness. Together, the total of 34,975 discharges comprised more than one-quarter (27.7%) of all discharges (126,317 excluding hospital newborns) from these facilities.

Butler Hospital, one of the two psychiatric specialty hospitals, had by far the largest number of discharges with a principal diagnosis of MD/SA, with nearly one-third (33.1%) of all such patients statewide. (Table 1) At the other end of the spectrum, the Rehabilitation Hospital had no discharges of this kind, and Women and Infants Hospital had only one. Several other general hospitals

that do not have a psychiatry department also had low volumes of such discharges. Nearly all of the patients with only an additional diagnosis of MD/SA were discharged from the acute-care general hospitals, with Rhode Island Hospital treating the largest number of these patients. Taken as a group, the acute-care general hospitals treated 59.6% of the discharges with a principal diagnosis of MD/SA and 84.8% of discharges with any diagnosis of MD/SA.

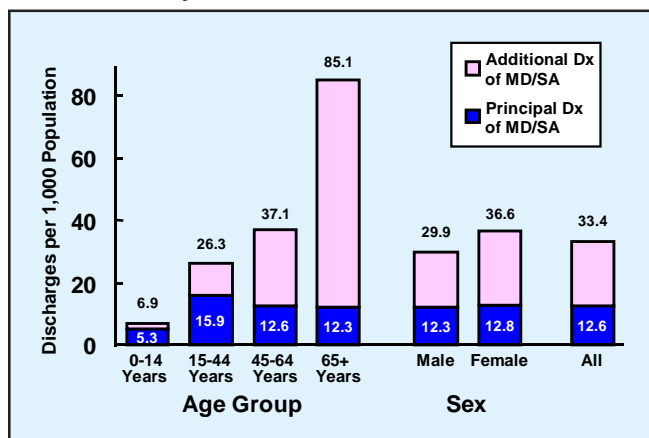
**Table 1. Hospital Discharges with a Diagnosis of a Mental Disorder or Substance Abuse (MD/SA), by Position of Diagnosis and Hospital, Rhode Island, 2002**

Hospital	Principal Diagnosis of MD/SA	Additional Diagnosis of MD/SA
Bradley	968	0
Butler	4,357	4
Kent County	1,482	2,854
Landmark	654	1,545
Memorial	113	1,997
Miriam	78	2,381
Newport	667	1,107
Rehabilitation	0	157
Rhode Island	1,140	5,428
Roger Williams	1,754	2,061
South County	68	855
St. Joseph	1,820	1,664
Westerly	66	766
Women and Infants	1	988
<b>All Hospitals</b>	<b>13,168</b>	<b>21,807</b>

Within the broad definition of MD/SA, the most commonly appearing principal diagnosis category was affective disorders, with 5,362 discharges, or 40.7% of these discharges. The most commonly reported additional diagnoses were senility and organic mental disorders (5,391), with large numbers of discharges also diagnosed with anxiety, somatoform, disassociative, and personality disorders (3,152) and alcohol-related mental disorders (3,093).

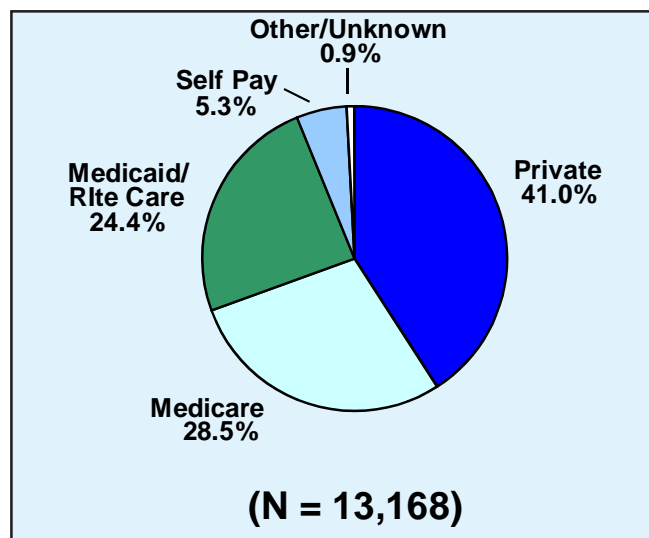
Rates of hospitalization with any diagnosis of MD/SA were strongly dependent on age, with the elderly rate (85.1 per 1,000 population) over ten times that of children ages 0-14 (6.9) and over double the next highest rate, the rate for persons ages 45-64 (37.1). (Figure 1) For discharges with a principal diagnosis of MD/SA, there was less variability with age; the highest rate, among those ages 15-44 (15.9), was three times the lowest rate, found in the 0-14 year age group (5.3). By sex, the overall hospitalization rate for females (36.6) was 22.4% higher than the rate for males (29.9).

For hospitalizations with a principal diagnosis of MD/SA, the most common source of payment for hospital care was private health insurance (41.0%), including Blue Cross/Blue Shield, United Healthcare, Blue Chip, commercial insurers, the CHAMPUS pro-



**Figure 1.** Hospital discharges per 1,000 population with diagnosis of a mental disorder or substance abuse, by position of diagnosis, age, and sex, Rhode Island, 2002.

gram, etc. (Figure 2) Medicare (28.5%) and Medicaid (24.4%) also paid for large proportions of these discharges. The proportion of self-pay patients (5.3%) among these discharges, who are presum-



**Figure 2.** Hospital discharges with principal diagnosis of a mental disorder or substance abuse, by expected source of payment, Rhode Island, 2002.

ably uninsured, was higher than for hospital care in general in Rhode Island (3.7% self-pay in 1996-2000).<sup>5</sup>

**Discussion.** Hospitalizations of persons with a diagnosis of a mental disorder or substance abuse comprise a large proportion of the inpatient care provided in Rhode Island hospitals. The majority of such patients have the MD/SA diagnosis secondary to a principal diagnosis of a physical illness or injury, and nearly all of these patients are treated in the state's eleven acute-care general hospitals. Even among patients with a principal diagnosis of MD/SA, the majority of care is provided in acute-care general hospitals, rather than in the state's two psychiatric specialty hospitals.

Both because of the overall volume of discharges with a diagnosis of MD/SA and, within that number, the proportion who have both mental and physical diagnoses, the provision of psychiatric inpatient care demands our attention. Challenges such as the sufficiency of medical care providers to serve these patients, the coverage for and access to psychiatric care under third-party payment systems, and the appropriate mix of inpatient and outpatient psychiatric services continue to confront the health care system. By examining patterns of psychiatric care using existing, regularly reported data sources, we are establishing a strong foundation for investigating these and other specific issues as they arise.

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